

SPECIAL SPECIFICATION

SECTION 07814S

INTERIOR INTUMESCENT FIREPROOFING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Preparing surfaces to receive fireproofing; protection of adjacent surfaces from overspraying; and spray application of water based, intumescent, fireproofing on interior, exposed structural steel wide flange columns, beams, pipe columns, and related exposed structural steel to provide rated fireproofing.

1.02 RELATED SECTIONS

- A. Section 05120 - Structural Steel.
- B. Section 05210 - Steel Joists.
- C. Section 05311- Steel Floor Deck.
- D. Section 05312 - Steel Roof Deck.

1.03 REFERENCES

- A. ASTM E 605 - Thickness and Density of Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members.
- B. ASTM E 736 - Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members.
- C. ASTM E 760 - Effect of Impact on Bonding of Sprayed Fire-Resistive Material Applied to Structural Members.
- D. ASTM E 84 - Test Method for Surface Burning Characteristics of Building Materials.
- E. UL Fire Resistance Directory.
- F. SSPC SP-1 - Solvent Cleaning.
- G. SSPC SP-2 - Hand Tool Cleaning.
- H. SSPC SP-3 - Power Tool Cleaning.
- I. SSPC SP-6 - Commercial Blast Cleaning.

1.04 SYSTEM DESCRIPTION

- A. Provide intumescent fireproofing system with [one] [1-1/2] hour fire rating.

1.05 SUBMITTALS

- A. Product Data: Indicate product characteristics, performance, and limitation criteria.
- B. Submit manufacturer's installation instructions.
- C. Certificates: Submit manufacturer's certificate that products meet or exceed specified requirements.
- D. Test Reports: Submit certified test reports indicating:
 - 1. Bond Strength of Fireproofing: ASTM E 760, tested to provide minimum bond strength twenty times weight of fireproofing materials.
 - 2. Fire test reports of fireproofing application to substrate materials similar to project conditions.
 - 3. UL Design Listings.
- E. Submit applicator's current certification, by product manufacturer, as factory trained and manufacturer approved installer of this product.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this Section with minimum five years documented experience.
- B. Applicator Qualifications: Company specializing in performing Work of this Section with minimum three years documented experience and approved by manufacturer.

1.07 REGULATORY REQUIREMENTS

- A. Conform to applicable code for fire resistance ratings.
- B. Submit certification of acceptability of fireproofing materials to authority having jurisdiction and to Architect/Engineer.

1.08 MOCKUP

- A. Provide mockup of applied intumescent fireproofing.
- B. Provide testing and analysis of mockup to manufacturer's published data.
- C. Apply sample section of 100 square feet in size to representative substrate on site.
- D. Comply with project requirements as to thickness, density, fire rating, and finish texture.

- E. Examine installation to determine variances.
- F. If accepted, mockup will demonstrate minimum standard for Work.
- G. Mockup may remain as part of the Work..

1.09 PROJECT REQUIREMENTS

- A. When temperature is less than 40 degrees F, follow manufacturer's field instructions for cold weather installation. Do not apply when surface temperature is less than 5 degrees F above the dew point.
- B. Provide ventilation in areas to receive fireproofing during and 72 hours, minimum, after application, to dry materials and dissipate solvent odors.
- C. Maintain non-toxic, unpolluted working area. Provide temporary enclosure to prevent spray from contaminating air.

1.10 SEQUENCING

- A. Sequence work in conjunction with placement of ceiling hanger tabs, mechanical component hangers, and electrical components.

1.11 WARRANTY

- A. Fireproofing to remain free from cracking, checking, dusting, flaking, spalling, separation, and blistering. Reinstall or repair such defects or failures.

PART 2 - PRODUCTS

2.01 MANUFACTURER

- A. Albi Manufacturing, "ALBI CLAD TF."

2.02 MATERIALS

- A. Intumescent Fireproofing: Single component, water based, factory mixed, asbestos free, intumescent material blended for uniform texture; conforming to following:
 1. Bond Strength: ASTM E 736, 200 pounds per square foot when set and dry.
 2. Bond Impact: ASTM E 760, no cracking, flaking, or delamination.
 3. Dry Density: ASTM E 605, minimum average density of 15 pounds per cubic foot, with minimum individual density of 14 pounds per cubic foot.
 4. Surface Burning Characteristics, ASTM E 84:
 - a. Flame Spread: 2.
 - b. Smoke Developed: 5.

5. Compressive Strength: Minimum 500 pounds per square foot.
- B. Primer:
1. Type recommended or approved by fireproofing manufacturer.
 2. Product: Albi, "487W".

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work.
- B. Verify that clips, hangers, supports, sleeves, and other items required to penetrate fireproofing are in place.
- C. Verify ducts, piping, equipment, or other items which would interfere with application of fireproofing are not positioned until fireproofing work is complete.
- D. Verify that voids and cracks in substrate are filled, and projections are removed where fireproofing is exposed to view as a finish material.
- E. Beginning installation indicates acceptance of existing substrate.

3.02 PREPARATION

- A. Conduct preparation in accordance with SSPC SP-1, SSPC SP-2, SSPC SP-3, or SSPC SP-6 as appropriate to prepare substrate.
- B. Clean substrate of dirt, dust, grease, oil, loose material, or other matter which may effect bond of fireproofing.
- C. Seal penetrations or open ended fireproofing termination by chamfering at 45-degree angle and sealing with high heat silicone sealant.
- D. Install reinforcement over structural members as indicated on Drawings, or UL Fire Resistance Directory listings.
- E. Protection:
 1. Protect floor areas by completely covering with tarps or 4 mil polyethylene sheets.
 2. Protect adjacent surfaces and equipment from damage by overspray, fall-out, and dusting.
 3. Close off and seal ductwork in areas where fireproofing is being applied.

3.03 APPLICATION

- A. Apply primer and fireproofing in accordance with manufacturer's instructions. Do not apply to surfaces which would prohibit proper adhesions.
- B. Apply primer in accordance with primer manufacturer's recommendations. Provide primer "cut-back" 3 inches for bolted connections and 12 inches for welded connections.
- C. Apply fireproofing in sufficient thickness to achieve rating, with as many passes necessary to cover with monolithic blanket of uniform hardness, density and texture. Spray, and roll smooth finished surface.

3.04 FIELD QUALITY CONTROL

- A. Conduct field inspection and testing in accordance with manufacturer's instructions.
- B. Verify compliance with specified requirements.
- C. Patch fireproofing, which has been cut away to facilitate work of other trades, so as to maintain complete coverage of full thickness on appropriate substrate.
- D. Correct unacceptable Work and provide further inspection to verify compliance with requirements.

3.05 CLEANING

- A. Remove excess material, overspray, droppings, and debris.
- B. Remove fireproofing from materials and surfaces not specifically required to be fireproofed.

END OF SECTION